

THE SUBSPECIES OF *ACRAEA JOHNSTONI* GODMAN (LEP.: NYMPHALIDAE)

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Abstract

Three subspecies of *Acraea johnstoni* Godman are recognized; the typical one, *A. j. toruna* Grose-Smith (= *butleri* Eltringham, nec Aurivillius) and *A. j. praelongata* stat. nov. The latter subspecies was described originally as a female form of *johnstoni* by Joicey & Talbot; the male and a second female form are described and illustrated here.

Introduction

The various forms attributable to *Acraea johnstoni* have been discussed by Eltringham (1911, 1912) and Carpenter (1932) but to this day only two subspecies have been accepted. These are generally known by the names *johnstoni* Godman and *butleri* Aurivillius.

Recent material from the Mwinilunga district of NW Zambia, and illustrations by Berger (1981) of specimens from SE Zaire, however, show that these populations represent a third subspecies. The name *praelongata*, originally used by Joicey & Talbot (1927) for a female form from SE Zaire, and further discussed by Carpenter (1932), may be applied to this subspecies and thus is raised here to the level of a species-group name.

The name *butleri* was also proposed originally as an infrasub-specific one (Aurivillius, 1899) and was not used at the level of a species-group name until Eltringham (1912) accorded it subspecific status. Accordingly, under the rules of Article 10c of the International Code of Zoological Nomenclature (1985 edition), it falls as a junior synonym to the name *toruna* Grose-Smith, as originally placed by Eltringham (1911).

The taxonomy of these subspecies is outlined below.

Systematics

Acraea johnstoni johnstoni Godman

Acraea johnstoni Godman, 1885, *Proc. zool. Soc. Lond.* 1885: 537.

Type-locality Kilimanjaro, Tanzania.

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The synonymy and forms of this subspecies have been dealt with adequately by Eltringham (1911, 1912) and Carpenter (1932). The subspecies ranges from S. Sudan and N. Uganda to Mozambique and E. Zimbabwe. The orange forms are lacking from these extremes of distribution and form *johnstoni* has not been recorded from Malawi, NE Zambia or extreme S. Tanzania, whilst yellow and white forms occur throughout.

Acraea johnstoni toruna Grose-Smith

Acraea lycoa Female ab. *butleri* Aurivillius, 1899, *K. svenska Vetensk-Akad. Handl.* **31**(5): 115. Type-locality Ruwenzori. (Infrasubspecific name).

Acraea toruna Grose-Smith, 1900, *Novit. zool.* **7**: 546. Type-locality Toro, Uganda.

Acraea johnstoni toruna Grose-Smith; Eltringham, 1911: 15.

Acraea johnstoni butleri Eltringham (*nec* Aurivillius), 1912, *Trans ent. Soc. Lond.* 1912: 341. (Raised from ab.).

Acraea butleri Eltringham; Aurivillius, 1913: 250.

This subspecies occurs in SW Uganda, Rwanda and the Ituri and Kivu districts of NE Zaire. The various forms were illustrated by Berger (1981). This subspecies has the subapical band on the forewing broad and the palpi black. The specimens placed "near f. *praelongata*" by Carpenter (1932) belong here.

Acraea johnstoni praelongata stat. nov. (Fig. 1)

Acraea johnstoni female f. *praelongata* Joicey & Talbot, 1927, *Encycl. Ent.* (B) **2**(1): 13: Type-locality S. Lufonso R., Lake Mweru district, SE Zaire. (Infrasubspecific name).

This subspecies, known from NW Zambia and SE Zaire, is distinguishable from the others by the combination of a relatively narrow subapical band and large elongate spot in space 2 of the forewing, the indistinct and diffuse margin to the hindwing basal patch, and the ventrally yellow palpi.

Both sexes are known from very few specimens but all known males have the wings brown with primrose-yellow pale areas on both fore and hind wings. (See Berger (1981) for a coloured illustration). The female is larger than the male and so far two colour forms are known. Typical female f. *praelongata* is known from SE Zaire and has the hindwing patch yellow, the forewing spots white. This also was illustrated by Berger (1981). A second female form has the pale areas of both fore and hind wings white and is known from the Mwinilunga district of NW Zambia. It is described below.

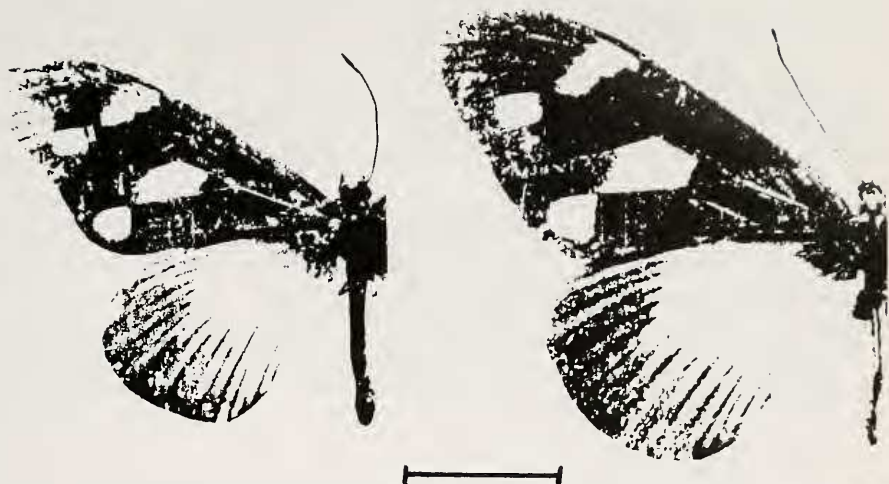


Fig. 1. *Acraea johnstoni praelongata* stat. nov.: male (left) and holotype of female form *albimaculosa* nov. (right), from N.W. Zambia. (Scale bar = 1cm.)

female form *albimaculosa* nov.

Similar to female form *praelongata* as described by Joicey & Talbot (1927) but wings uniformly brown with all pale markings white. The type is figured here.

Holotype female, Mwinilunga, N. Rhodesia (Zambia), Feb. 1960. Paratypes: 1 female, Mwinilunga, June 1967; 1 female, Kanyita Stream, Mwinilunga, March 1963; 1 female, Hillwood Farm, Ikelenge, 25 March 1977, A. Heath. Holotype and paratype in Natural History Museum, Bulawayo; paratypes in British Museum (Natural History) and A. Heath collection, Cape Town.

In addition to the above, the following males have been examined: 1 male, Sakeji R., Ikelenge, Zambia, March 1957; 1 male, Hillwood Farm, Ikelenge, March 1977, A. Heath.

Acknowledgement

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References

- Aurivillius, C. 1899. Rhopalocera Aethiopica. *K. svenska Vetensk-Akad. Handl.* 31(5): 1-561.
- Aurivillius, C. 1913. Family Acraeidae. In Seitz, A. (ed.), *The Macrolepidoptera of the World*. 13. *The African Rhopalocera*. Kernen, Stuttgart, pp. 239-292.
- Berger, L. A. 1981. *Les Papillons du Zaïre*. Weissenbruch, Bruxelles, 543pp.

- Carpenter, G. D. H. 1932. The forms of *Acraea johnstoni* Godm. (Lep.: Nymphalidae), and their distribution. *Trans.ent.Soc. Lond.* 80: 251-268.
- Eltringham, H. 1911. On the forms and geographical distributions of *Acraea lycoa* Godt. and *Acraea johnstoni* Godm. *Trans. ent. Soc. Lond.* 1911: 1-15.
- Eltringham, H. 1912. A monograph of the African species of the genus *Acraea* Fab., with a supplement on those of the Oriental Region, *Trans.ent.Soc.Lond.* 1912: 1-374.
- Joicey, J. J. & Talbot, G. 1927. New forms of Lepidoptera Rhopalocera. *Encycl. ent. (B) Memoires et notes II Lépidoptères* 2(1): 1-14.

Notes and Observations

EUPITHECIA ABIETARIA (GOEZE), (LEP.: GEOMETRIDAE)
— BREEDING IN WALES — In view of the paucity of records of this elusive moth in Britain generally and in Wales in particular it is worth recording that at a meeting of the Lancashire and Cheshire Entomological Society at Worlds End, Clwyd on 6th September 1986 when ten members and friends worked the district conscientiously in inclement weather very little of interest was seen but the penultimate paragraph about the meeting in the Society's Proceedings reads:—

“A walk in the forestry ride on the other side of the road was little more productive but what we at first sign took to be a stand of Sitka spruce was found to have dropped some very large cones in the recent winds and these identified the trees as noble fir (*Abies procera* Rehder), some of the cones showed signs of larval feeding and one that was opened up was found to contain a microlepidopterous larva, to be identified in the fullness of time.”

As the larvae appeared to be microlepidoptera, Dr. Mike Hull took a good sample hoping to identify the incumbent but got only a large number of parasites. I took only six cones, mainly for the purpose of checking the identity of the tree. On the 2nd June 1987 a fine male *Eupithecia abietaria* (Goeze) emerged from these.

The status of this species in Britain has not been well understood in recent times and Skinner (Skinner B. *Moths of the British Isles*, 1984) even suggested that it might be extinct as a breeding species and that the odd specimens taken could be the result of accidental importation or immigration. Subsequently, Skinner himself discovered a strong breeding colony in Northumberland. Single specimens have also been taken rather randomly over much of Northern Britain.

I have myself often collected a large number of spruce cones from various localities, including Scotland, the Forest and Wales,